

PRELIMINARY AMENDMENT
US NATIONAL PHASE OF PCT/GB2003/003431

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

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1. (Original) Apparatus for the treatment of hazardous material and decontamination of items contaminated with such material comprising an operator accessible treatment vessel adapted to hold said hazardous material or contaminated items and a light source capable of irradiating contents within the treatment vessel with a predetermined wavelength of light.
2. (Currently amended) Apparatus according to Claim 1 wherein the treatment vessel comprises ~~one or more trays~~ at least one tray for holding the hazardous material or contaminated items, ~~further comprising and~~ distribution means for circulating a carrier medium within or through the apparatus.
3. (Currently amended) Apparatus according to ~~either one of Claims 1 and 2~~ Claim 1, further ~~comprising~~ including monitoring means.
4. (Currently amended) Apparatus according to Claim 1 further ~~comprising~~ including a holding tank capable of holding a carrier medium, a catalyst hopper capable of holding a catalyst, a mixing vessel facilitating mixing of the carrier medium and the catalyst, wherein the treatment vessel comprises ~~one or more treatment chambers~~ at least one treatment chamber each having a housing containing a plurality of treatment beds and a light source, and a distribution header for controlling the flow of carrier medium and catalyst into the treatment chambers.

5. (Original) Apparatus according to Claim 4 wherein each treatment bed comprises means for inducing turbulent flow within the carrier medium.
6. (Original) A method for treatment for hazardous material or decontamination of items contaminated with such material comprising the step of irradiating said material or said items in the presence of a catalyst with light having a wavelength in the range of from 310 to 400 nanometres.
7. (Original) A method according to Claim 6 wherein the catalyst is TiO_2 .
8. (Original) A method according to Claim 7 wherein the catalyst is TiO_2 in either rutile or anatase form.
9. (Currently amended) A method according to ~~any of Claims 6 to 8~~ Claim 6, wherein the irradiation step is carried out at a temperature of between about 15°C to 35°C and a pressure of between about 1 bar to 5 bar.
10. (Currently amended) A method according to ~~any of Claims 6 to 9~~ Claim 6, wherein the irradiation step is carried out in an aqueous based carrier medium.